

Claims

1. A method of providing terrain data to multiple users, the method comprising:
receiving a request for terrain data from one of multiple requestors;
5 extracting requested terrain data from a database of terrain data;
transforming the extracted terrain data to a format identified in the request;
and
sending the formatted terrain data to the requestor.
- 10 2. The method of claim 1 wherein transforming comprises scaling the extracted terrain data.
3. The method of claim 1 wherein transforming comprises modifying an orientation of the extracted terrain data.
- 15 4. The method of claim 1 wherein the request comprises parameters indicating at least one of the location, size, resolution, and type of terrain data required.
5. The method of claim 1 wherein the request comprises process control criteria.
- 20 6. The method of claim 5 wherein the process control criteria comprises at least one of a priority indication, response routing information and integrity requirements.
7. The method of claim 1 wherein the request comprises an integrity
25 requirement, and further comprising:
using separate terrain servers to extract terrain data based on a request; and
comparing extracted terrain data from the separate terrain servers.
8. A computer readable medium having instructions for causing a computer to
30 execute a method of providing terrain data to multiple users, the method comprising:
receiving a request for terrain data from one of multiple requestors;
extracting requested terrain data from a database of terrain data;
transforming the extracted terrain data to a format identified in the request;
and

sending the formatted terrain data to the requestor.

9. The computer readable medium of claim 8 wherein transforming comprises scaling the extracted terrain data.

5

10. The computer readable medium of claim 8 wherein transforming comprises modifying an orientation of the extracted terrain data.

11. The computer readable medium of claim 8 wherein the request comprises parameters indicating at least one of the location, size, resolution, and type of terrain data required.

12. The computer readable medium of claim 8 wherein the request comprises an integrity requirement, and wherein the method further comprises:
15 using separate terrain servers to extract terrain data based on a request; and comparing extracted terrain data from the separate terrain servers.

13. A system that provides terrain data to multiple users, the system comprising:
20 means for receiving a request for terrain data from one of multiple requestors; a data extraction module that extracts requested terrain data from a database of terrain data;
a data processing module that transforms the extracted terrain data to a format identified in the request; and
means for sending the formatted terrain data to the requestor.

25

14. The system of claim 13 and further comprising means for managing queue functions related to the order in which requests are handled.

15. The system of claim 14 wherein queue functions comprise adding new
30 requests, de-queuing of requests, and removing aborted requests.

16. The system of claim 13 and further comprising means for determining the priority of requests based on at least one of received order, request type, requested priority and classification of a requesting device.

17. A system that provides terrain data to multiple users, the system comprising:
a request interface that receives requests for terrain data from multiple requestors;
- 5 a data extraction module that extracts requested terrain data from a database of terrain data;
a data processing module that transforms the extracted terrain data to a format identified in the request; and
a response interface that sends the formatted terrain data to the requestor.
- 10 18. The system of claim 17 wherein the request interface and the response interface comprise a transceiver communicatively coupled to the multiple requestors.
19. A computer readable medium having a terrain data request stored thereon, the request comprising:
- 15 a location parameter indicating the location of terrain;
a size parameter indicating the size of terrain about the location of the terrain;
a resolution parameter identifying the resolution of the terrain data corresponding to the location and size parameters; and
- 20 a data processing criteria specifying data processing to be performed on the terrain data requested.
20. The computer readable medium of claim 19 wherein the data processing criteria comprises criteria selected from the group consisting of scaling, filtering,
- 25 orientation and data layering.
21. The computer readable medium of claim 19 wherein the request further comprises process control criteria selected from the group consisting of priority indication, response routing information and integrity requirements.
- 30 22. A system that provides terrain data to multiple users, the system comprising:
request interface that receives requests for terrain data from multiple requestors;

a first data extraction module that extracts requested terrain data from a database of terrain data;

a second data extraction module that extracts requested terrain data from a database of terrain data;

5 a data processing module that transforms the extracted terrain data to a format identified in the request;

a response interface that sends the formatted terrain data to the requestor.

23. The system of claim 22 wherein the data processing module compares
10 extracted terrain data from the first and second extraction modules.

24. The system of claim 22 wherein the data processing module combines
extracted terrain data from the first and second extraction modules.

15 25. The system of claim 22 and further comprising multiple further extraction modules operating in parallel to obtain terrain data from different portions of the terrain identified in the request.

26. A method of providing terrain elevation information to multiple users, the
20 method comprising:

receiving a request for terrain elevation information from one of multiple requestors;

extracting requested terrain elevation information from a database of terrain data;

25 transforming the extracted terrain elevation information to a format identified in the request as compatible with the requestor; and

sending the formatted terrain data to the requestor.